



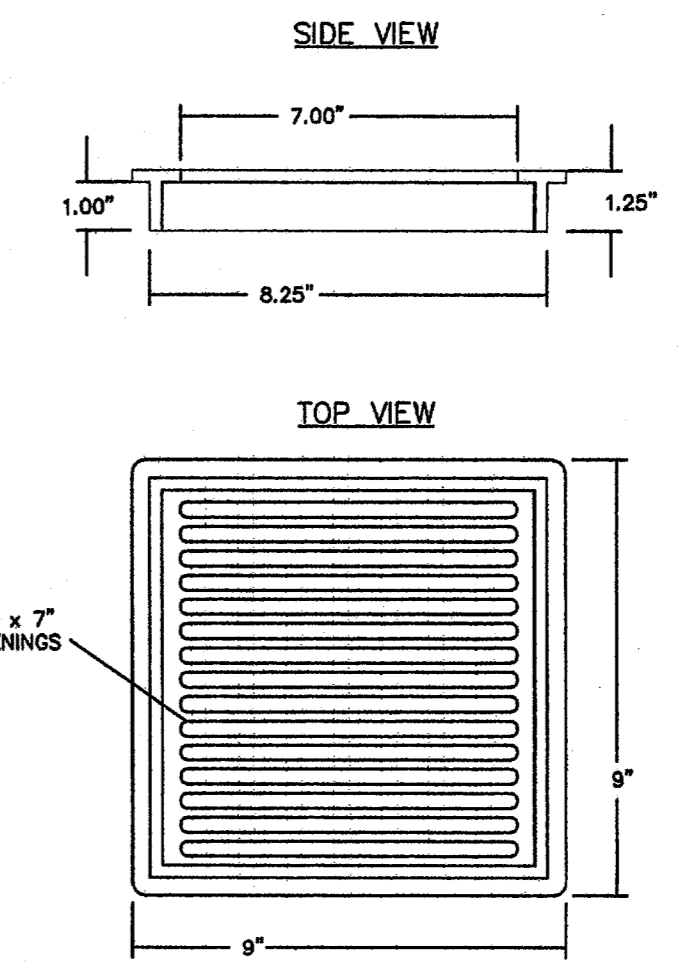
TEXAS EXCAVATION
SAFETY SERVICES
1-800-344-8377

DATE	11/13/07
BY	
REVISIONS	

GRATE CAPACITY CALCULATION

$Q = (Co)A(2gd)^{0.5}$
 WHERE:
 Q=INLET CAPACITY, C.F.S.
 Co=ORIFICE COEFFICIENT=0.67
 A=CLEAR OPENING AREA OF THE GRATE, FT²
 g=32.2 FT/S²
 d=DEPTH OF WATER ABOVE THE TOP OF GRATE, FT
 MINIMUM ALLOWED CLEAR OPENING OF 9" SQUARE GRATE TO BE 27.3 IN² = 0.19 FT²
 $Q = (Co)A(2gd)^{0.5}$
 $Q = 0.67 \times 0.19(2 \times 32.2 \times 0.5)^{0.5}$
 Q=0.72 C.F.S. PER GRATE AT 6-IN. HEAD
 Q=0.51 C.F.S. PER GRATE AT 3-IN. HEAD

GRATE INLET DETAIL



SITE NOTES

- 1) CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULE, SLOPED PAVING, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY ENTRANCE LOCATIONS, TOTAL NUMBER, LOCATIONS & SIZES OF ROOF DOWNSPOUTS.
- 2) PRIVATE STORM DRAIN PIPE TO BE CONSTRUCTED OF SMOOTH INTERIOR P.V.C. OR H.D.P.E. SUCH AS ADS-N12 OR EQUAL.
- 3) ALL CATCH BASINS TO BE 9" x 9" SQUARE P.V.C.
- 4) ALL GRATE INLETS TO BE 9" x 9" SQUARE LOW-PROFILE WITH 5/16" OR GREATER GRATE OPENINGS WITH 27.3 SQUARE INCH OR GREATER OPEN SURFACE AREA.
- 5) ALL ROOF DOWNSPOUTS SHALL CONNECT DIRECTLY TO PRIVATE STORM SYSTEM.
- 6) REFER TO ARCHITECTURAL PLANS FOR PLANS AND SPECS. FOR PRIVATE ENTRY GATES.
- 7) TREE SURVEY PERFORMED BY OTHERS.
- 8) DAMAGE TO LAKE FOREST DRIVE AND THE ASSOCIATED DRAINAGE SWALE DUE TO CONSTRUCTION RELATED ACTIVITIES SHALL BE REPAIRED/REPLACED PRIOR TO FINAL ACCEPTANCE.

BUILDING NOTE

CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF SLOPED PAVING, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS, EXACT BUILDING UTILITY ENTRY LOCATIONS, DOWNSPOUT LOCATIONS AND TOTAL NUMBER OF DOWNSPOUTS REQUIRED.

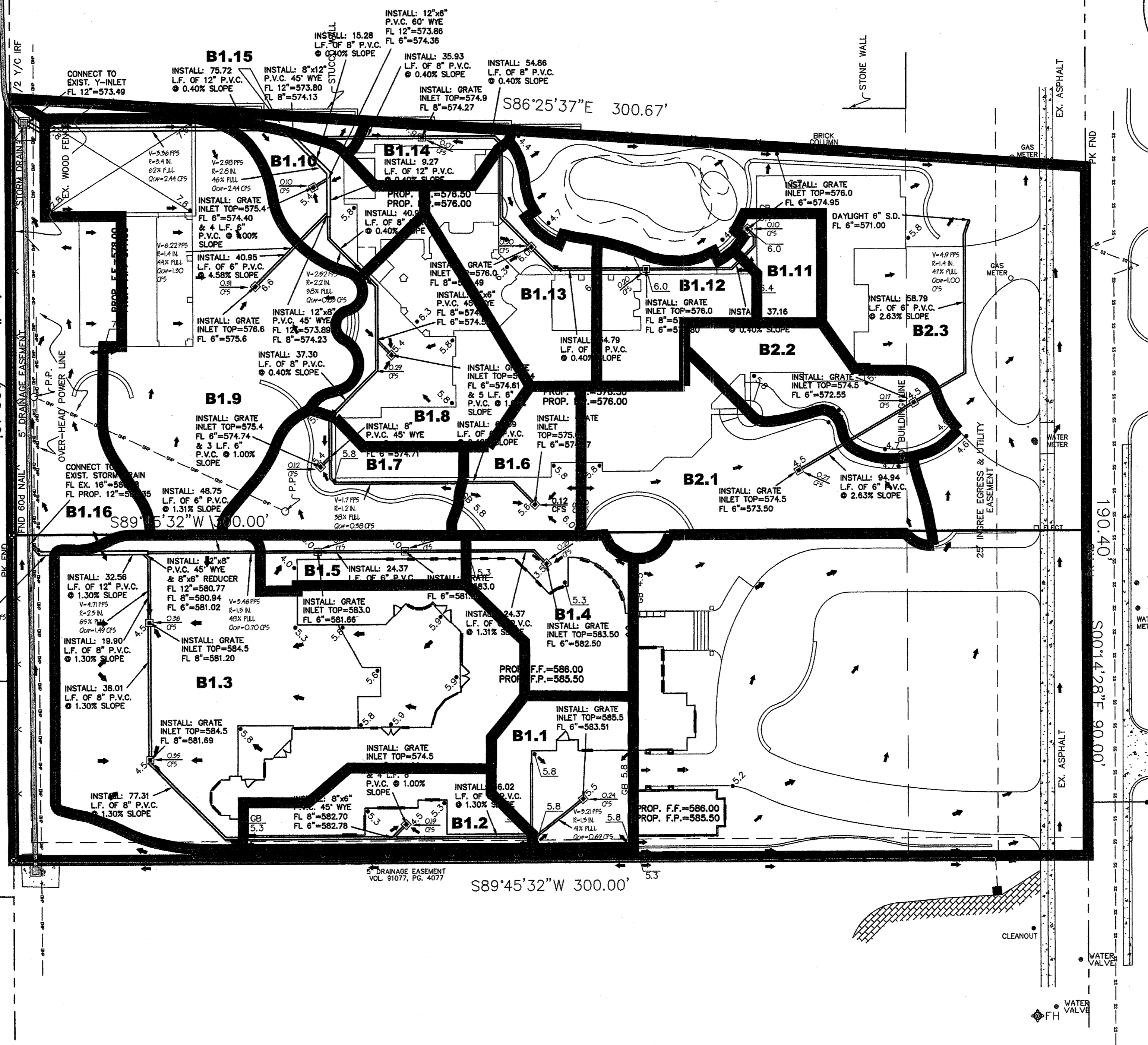
**** NOTICE TO CONTRACTORS ****

THE CONTRACTOR(S) SHALL BE RESPONSIBLE FOR CONFIRMING THE LOCATION (HORIZONTAL/VERTICAL) OF ANY BURIED CABLES, CONDUITS, PIPES AND STRUCTURES (STORM SEWER, SANITARY SEWER, WATER, GAS, TELEVISION, TELEPHONE, ETC.) WHICH IMPACT THE CONSTRUCTION SITE. THE CONTRACTOR(S) SHALL NOTIFY THE OWNER IF ANY DISCREPANCIES ARE FOUND BETWEEN THE ACTUAL CONDITIONS VERSUS THE DATA CONTAINED IN THE CONSTRUCTION PLANS. ANY COSTS INCURRED AS THE RESULT OF NOT CONFIRMING THE ACTUAL LOCATION (HORIZONTAL/VERTICAL) OF SAID CABLES, CONDUITS, PIPES, AND STRUCTURES SHALL BE BORNE BY THE CONTRACTOR. IF THE CONTRACTOR(S) DOES NOT ACCEPT THE EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, HE MAY HAVE MADE AT HIS EXPENSE A TOPOGRAPHIC SURVEY BY A REGISTERED PROFESSIONAL ENGINEER OR A REGISTERED PROFESSIONAL LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.

MARK T. OWENS P.E.
GENERAL CIVIL CONSULTING ENGINEER
6230 INDIAN PAINT ROAD
AUBREY, TX 76227
PH. 940.595.0528
CONTACT: NATHAN OLSON

LOT 1A & 1B, MILLIKEN ADDITION
SPRINGFIELD CUSTOM HOMES (OWNER LOT 1B)
RAY JACKSON (OWNER LOT 1A)
PRIVATE STORM SYSTEM PLAN

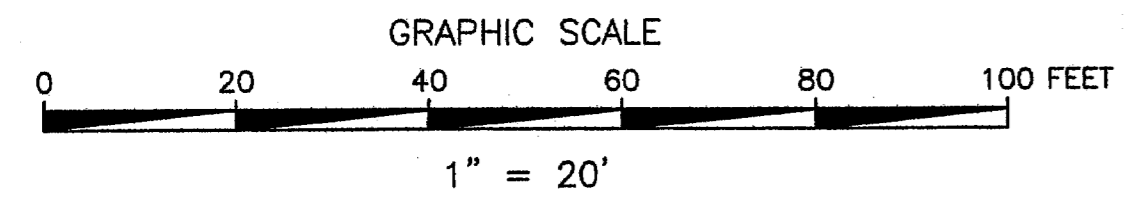
MARK T. OWENS
85113
REGISTERED PROFESSIONAL ENGINEER
PROJECT MANAGER
NJO
PROJECT TECHNICIAN
NJO
JOB NUMBER
2006.018
SHEET NUMBER



DRAINAGE CALCULATIONS

9/07/2007

Drainage Area #	Impervious Area C=0.95	Pervious Area C=0.25	Total Area (acres)	C Pervious	C Impervious	CW	Tc	I100	Q100
PROPOSED CONDITIONS									
B1.1	0.033	0.001	0.034	0.25	0.95	0.94	15	7.52	0.24
B1.2	0.023	0.011	0.034	0.25	0.95	0.72	15	7.52	0.19
B1.3	0.069	0.117	0.186	0.25	0.95	0.51	15	7.52	0.71
B1.4	0.030	0.008	0.038	0.25	0.95	0.80	15	7.52	0.23
B1.5	0.009	0.011	0.021	0.25	0.95	0.56	15	7.52	0.09
B1.6	0.014	0.013	0.027	0.25	0.95	0.81	15	7.52	0.12
B1.7	0.009	0.028	0.037	0.25	0.95	0.42	15	7.52	0.12
B1.8	0.035	0.017	0.053	0.25	0.95	0.72	15	7.52	0.29
B1.9	0.046	0.096	0.142	0.25	0.95	0.48	15	7.52	0.51
B1.10	0.009	0.018	0.027	0.25	0.95	0.49	15	7.52	0.10
B1.11	0.014	0.000	0.014	0.25	0.95	0.93	15	7.52	0.10
B1.12	0.028	0.001	0.028	0.25	0.95	0.93	15	7.52	0.20
B1.13	0.041	0.000	0.041	0.25	0.95	0.95	15	7.52	0.30
B1.14	0.009	0.005	0.014	0.25	0.95	0.70	15	7.52	0.07
B1.15	0.001	0.008	0.009	0.25	0.95	0.32	15	7.52	0.02
B1.16	0.006	0.112	0.117	0.25	0.95	0.28	15	7.52	0.25
SUB-TOTAL			0.822						3.52
B2.1	0.024	0.054	0.078	0.25	0.95	0.46	15	7.52	0.27
B2.2	0.020	0.016	0.036	0.25	0.95	0.64	15	7.52	0.17
B2.3	0.243	0.200	0.443	0.25	0.95	0.63	15	7.52	2.11
SUB-TOTAL			0.558						2.56



MATCH LINE

MATCH LINE

GRAPHIC SCALE

1" = 20'